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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,889	03/16/2001	Peter Zhu	JOHNA.060A	7456

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PHILIP S. JOHNSON
JOHNSON & JOHNSON
ONE JOHNSON & JOHNSON PLAZA
NEW BRUNSWICK, NJ 08933-7003

EXAMINER	
CROSS, LATOYA I	

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/810,889	ZHU ET AL	
	Examiner	Art Unit	
	LaToya I. Cross	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 34-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10,11,13 and 34-38* is/are rejected.

7)☒ Claim(s) *9 and 12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 15, 2004 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-8, 10, 11, 13, 34 - 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Opp in view of Iannacone et al and Applicants' admitted prior art on page 1, lines 10-28 of the specification.

Opp teaches a process and kit for the determination of concentrations of aldehydes. Specifically, Opp teaches employing a particular amount of a reagent to react with a point of interest amount of an aldehyde in a sample. Then Opp teaches employing a second reagent to react with any left over aldehyde in the sample to produce a color change, indicating an amount of aldehyde in excess of the point of interest amount of aldehyde in the sample. In examples I and II, Opp demonstrates how the disclosed method can be used to determine amounts of aldehyde less than, and in excess of the point of interest, with development of a purple color, or no development of a purple color.

Opp however, does not teach the particular reactants claimed, namely MBTH and an oxidant. Iannacone, et al., as well as applicants' admitted prior art, teach a two component reactant system for testing of aldehydes, namely MBTH and an oxidant (see column 4, lines 7-9, of Iannacone, et al., specification, lines 10-14). Iannacone, et al. specifically teach that color formation varies depending on the concentration of aldehyde in the sample (column 5, lines 32-36), with green color developed at no aldehyde, changing to shades of blue upon increasing concentrations of aldehyde. It would have been obvious to one having ordinary skill in the art to modify the method of Opp to employ the reagent system of Iannacone, et al. and applicants' admitted prior art for the reasons given by Iannacone, et al. and applicants – namely stability and high sensitivity of the MBTH/oxidant reagent system. As to the development of two different colors, depending on the concentration of the aldehyde with respect to the concentration of the point of interest, it would appear that such a modification would be within the skill of the artisan. Opp teaches distinct responses, development of color and absence of such development representing different sides of the point of interest (presumably, the point of interest must be with either of these responses). Iannacone, et al. teach that the color developed varies with respect to the concentration of aldehyde. It would be within the skill of the ordinary artisan to determine, through routine experimentation, a first color representing an excess of aldehyde and a second color, representing less than a point of interest of aldehyde in the modified method of Opp.

With respect to claims 6 and 7, Opp teaches addition of both reactants simultaneously, but provides for sequential reaction by the form of each reactant. With respect to claim 7, it would have been obvious to one having ordinal skill in the ad to modify the modified method of

Opp to provide for sequential introduction of the reactants in order to avoid early dissolution of the second reactant, which may lead to improper color development.

With respect to claims 10, 11 and 13, both Opp and Iannacone, et al. teach separation of the two reagents to avoid premature reaction. Both incorporate one reagent into a solid and one in solution. Iannacone, et al. specifically teach putting the MBTH on an adsorbent material. It would have been obvious to one having ordinary skill in the art to separate the two reagents by providing one on an absorbent material in order to avoid premature reaction of the reagents, as well as stability and ease of handling.

Response to Arguments

4. Applicant's arguments filed July 15, 2004 have been fully considered but they are not persuasive. Applicants argue that the prior art fails to teach reacting remaining aldehyde with excess MBTH left over from the first reaction. In response, it should be noted that Iannacone et al teaching oxidizing the MBTH and allowing the oxidized MBTH to react with any remaining aldehyde. At column 4, beginning at line 10 of Iannacone et al, the reference explains that aldehyde reacts with MBTH to form an azine; some MBTH is oxidized to a reactive cation which combines with the azine to form a blue dye. Thus, Iannacone et al do not teach an additional reagent (other than an oxidant to oxidize MBTH, similar to the method Applicants claim). Thus, Applicants' are incorrect in stating that Iannacone et al requires reacting a second reagent to produce a second color.

Allowable Subject Matter

5. Claims 9 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach or fairly suggest employing the particular membranes recited in the measurement of aldehydes in a two reactant process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is 571-272-1256. The examiner can normally be reached on Monday-Friday 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jill Warden
Supervisory Patent Examiner
Technology Center 1700